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ABSTRACT

A report is given of student learning outcomes investigated over a one and one half year period on the Spanish Dame School Project. This project provided instruction in Spanish and English for approximately 100 children between the ages of three and six. A pretest-posttest control group design was used involving eight groups. Four tests were used on a pre-post basis in the evaluation of the project and control group children. Language acquisition was measured by three instruments: The Comprehension of Directions, Tests of Basic Competence in English and Spanish, and The Test of English Grammar and Vocabulary. School readiness was measured through five categories of the Inventory of Developmental Tasks (IDT). An analysis of the correlations among the project developed instruments revealed low intercorrelations among the tests, thus indicating that they are measuring separate skills. Children's family and background data were collected from a parent interview. Findings include: (1) In the area of oral development in Spanish, both the three and four year old bilingual project preschool students demonstrated greater growth than three control groups; (2) On a performance task for four and five-year olds involving the correct use of the past tense in Spanish, ten out of 26 second year bilingual preschool children were able to perform successfully as were five out of 14 bilingual kindergarten class children. In contrast to this, no children in any of the control groups were able to successfully perform this task. In the area of oral English development, the preschool groups showed greater gains than the comparison groups. (CK)

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ANALYSIS OF A SPANISH BILINGUAL PRESCHOOL PROGRAM

by

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ANALYSIS OF A SPANISH BILINGUAL PRESCHOOL PROGRAM

Introduction

This paper reports student learning outcomes investigated over the past year and a half on the Spanish Dame School Project which is an ESEA, Title VII funded project operated by the Santa Clara County Office of Education and located in the Alum Rock Union School District in East San Jose, California. This project provided instruction in Spanish and English for approximately 100 children between the ages of three and six. Although the focus of this paper is on the preschool level, data is also reported for bilingual project kindergarten children since most of these children had also participated in the preschool program the prior year. Curricula for first and second year preschool and for kindergarten have been developed in Spanish and English by the project staff. The latest census tract for the San Antonio School area in which the project operates indicated an ethnic distribution of 45% Mexican-American, 40% Anglo, 9% Black and 6% other. The household income of 27% of the population is under $4,000. Of the population over 24 years of age, 20% have completed fewer than nine years of school.

Children in the preschool program spent approximately two hours a day in a home learning environment containing five children and a home tutor. Parents were actively involved in the learning activities and served as adult models for their children. The Home Intervention Project in Nashville, Tennessee, served as an initial model for the preschool part of the Spanish Dame Project. In the follow-up kindergarten children received a more structured type of instruction consisting largely of small group work.

Procedures

A pretest--posttest control group design was used involving eight groups. Project groups consisted of: three year olds in the first year bilingual

curriculum, four year olds in the second year bilingual curriculum, and five year olds in the kindergarten bilingual curriculum. Control groups consisted of: three year olds receiving no formal instruction, four year olds receiving no formal instruction, four year olds in a non-bilingual AB 1331 preschool program and five year olds in a traditional non-bilingual kindergarten class. In addition, the 1971-72 design includes blocking by child's dominant language and by whether the child had participated in the Spanish Dame Project the prior year. The control groups consisted of children of the same ethnic, socio-economic and geographic representation as those in the project. A comparison of the bilingual project and control group children on several background dimensions is shown in Tables 1 to 4. Control group children used substantially more English and less Spanish than children in the bilingual project and have parents with a somewhat higher educational level than those in the bilingual project.

Four tests were used on a pre-post basis in the evaluation of the project and control group children last year. The Test of English Grammar and Vocabulary and the Spanish and English Concept Comprehension Test were used both last school year and this year. The Comprehension of Directions, Subtest 2, of the Tests of Basic Competence in English and Spanish, developed by E. J. Cervenka in Texas and the Inventory of Developmental Tasks were used last year but not this year. Instead the Bettye Caldwell Preschool Inventory was administered since this test is already in regular use in the Alum Rock School District.

Language acquisition was measured by three instruments. The Comprehension of Directions, Subtest 2, of the Tests of Basic Competence in English and Spanish developed by E. J. Cervenka measures children's ability to carry out 20 simple oral directions such as "open the door." The Test of English

Grammar and Vocabulary developed by Mrs. Lily Fillmore, a linguist from Stanford University who served as a consultant to the project, contains four subtests: a 20-item vocabulary comprehension section in which the child is shown a picture or objects and asked to point to the thing named by the examiner, a 20-item vocabulary production section in which the child is shown a picture or object and asked, "What's this?", a 20-item grammar comprehension section, and a 20-item grammar production section. The Vocabulary and Concept Comprehension Test was developed by two project staff members, Marion Gonzales and Mario Solis, and is based upon the specific concepts the children were to learn in the preschool and kindergarten program. The test is comprised of five subtests administered separately in Spanish and English. The recognition of colors and shapes subtests require the child to name the color or geometric shape of the item shown by the examiner. The recognition of numbers subtest consists of two subcategories: counting from one to ten, and identifying numbers. The picture identification subtest asks the child to name: common objects in the home, common objects in the community, and other objects. The interrogative words subtest asks the child to ask questions in Spanish when shown pictures by the examiner.

School readiness of project children was measured through the use of the lower five categories of the Inventory of Developmental Tasks (IDT) developed by the Santa Clara Unified School District in 1968. The IDT was administered by trained aides or home tutors in the child's dominant language. The IDT contains a comprehensive collection of over 50 basic skills arranged hierarchically in areas including motor coordination, auditory/visual perception, and auditory/visual memory. Skills in these areas are considered important prerequisites for satisfactory learning experiences in school.

The Test of English Grammar and Vocabulary was item analyzed for the 126 three-to-five year olds who took the pretest and showed KR 20 reliability coefficients

for each subtest ranging between .61 and .70. This is considered quite high considering that only 20 items appeared in each subtest. The Vocabulary and Concept Comprehension Test was used in Spanish last year in two forms. Form 1 contained 28 items and was administered to the project and control group three-year olds while Form 2 contained 44 items and was administered to the four and five-year olds. The 28 item form of the Vocabulary and Concept Comprehension Test showed a KR 20 reliability coefficient of .86 based upon 38 three-year old children, while the 44 item version of this test showed a .96 reliability coefficient for the 54 four and five-year old children to whom it was administered.

An analysis of the correlations among the project developed instruments revealed low intercorrelations among the tests, thus indicating that they are measuring separate skills. Intercorrelations are displayed in Table 5.

Children's family and background data were collected from a parent interview administered to parents of both the project and control group children. This interview, conducted in either Spanish or English, obtained information regarding the birthplace and residence of the family, length of time in San Jose, dominant language of the child and parents, education and occupation of the parents, the frequency with which the child watches Sesame Street on TV, the frequency with which the child watches TV programs in Spanish or listens to radio programs in Spanish, the frequency with which the parents read to, tell stories to, or play games with their child, the number of years of schooling the parents desired for their child, and the rated importance that the parents attached to the following school activities for their child during the first few grades of school: speaking English, speaking Spanish, reading English, reading Spanish, learning about customs of the U.S., learning about customs of Mexico, and learning to work on his own.

Findings

In the area of oral development in Spanish as measured last year by the Vocabulary and Concept Comprehension Test in Spanish and by the Spanish Following Directions subtest of Cervenka's Test of Basic Competence, both the three and four year old bilingual project preschool students demonstrated greater growth last year than three control groups consisting of three and four year old children from the same background not receiving any preschool instruction and a four year old group in a non-bilingual preschool group. The four year old children in the first year bilingual curriculum did better than all control groups on the Vocabulary and Concept Comprehension Test in Spanish and better than two of the three control groups on the Spanish Following Directions subtest. The bilingual kindergarten group scored slightly higher and made somewhat greater gains in Spanish than the control kindergarten group on the Vocabulary and Concept Comprehension Test but not on the Following Directions Test (See Tables 6-9). Also, the second year bilingual preschool group scored higher and demonstrated a greater gain in Spanish than did the bilingual kindergarten children. This was probably influenced by the larger percentage of dominant Spanish-speaking children in the preschool class than in the kindergarten class and the heavier emphasis placed upon oral development in Spanish in the preschool curriculum.

On a performance task for four and five-year olds involving the correct use of the past tense in Spanish, ten out of 26 second year bilingual preschool children were able to perform successfully as were five out of 14 bilingual kindergarten class children. In contrast to this, no children in any of the control groups were able to successfully perform this task when tested.

In the area of oral development in English, the three and four-year old first year bilingual preschool group and the second year bilingual preschool group produced greater gains over the year on the Test of English Grammar and Vocabulary than each of the three comparison groups on vocabulary

comprehension, grammar comprehension and grammar production. The bilingual groups showed less gain on the vocabulary production subtest than the three and four-year old no treatment groups but greater gain than the children in the non-bilingual preschool program. The bilingual kindergarten group showed greater gain on the vocabulary comprehension subtest than the control kindergarten group which had more dominant English-speaking children in it but less gain than the control group on the other three subtests. (See Tables 10 and 11)

On the Following Directions Test in English, the three and four-year old first year bilingual groups and the second year bilingual group produced greater gains than the respective control groups. The bilingual kindergarten group, however, showed gains that were slightly less than those of the control kindergarten group. (See Tables 12 and 13)

In addition to assessing language progress in English and Spanish, the evaluators were interested in determining whether children in the bilingual classes were progressing at least as rapidly on developmental tasks, such as visual and auditory skills, as were the control group children. For this purpose six subtests of the Inventory of Developmental Tasks were used. The results indicated no significant differences in progress made between bilingual groups and control groups. (See Table 14)

In addition to determining the language growth made by children in the Spanish Dame Project, the researcher was also interested in determining, this year, the relationship of children's background to their scores on the Bettye Caldwell Preschool Inventory, the Vocabulary and Concept Comprehension Test in Spanish and English, and the Test of English Grammar and Vocabulary. A step-wise multiple regression analysis was used on the Stanford University computer to examine the relationship of these four dependent variables with

eight selected background variables taken from the parent interview: child's sex, length of residence in San Jose, frequency with which the child watched Sesame Street on TV, frequency with which the child listened to Spanish programs on TV or radio, the number of years of education completed by the father, number of years of education completed by the mother, the frequency with which the parents read to the child, and the number of years of education that the parents would hope their child receives. Results are displayed in Table 15 for four groups: the preschool Spanish Dame children, the preschool control group children, the in-school (K-1) Spanish Dame children, and the in-school (K-1) control group children. Where sex is a significant predictor of test scores, the word "boys" or "girls" is shown in parenthesis to indicate which sex performed significantly higher on the test. The minus sign in parenthesis behind any variables indicates that there was a negative relationship between that background variable and the test score. The R represents the cumulative multiple correlation as each new variable is added that significantly (at the .01 level) increases the multiple correlation.

Replication of the multiple regression analysis reveals very few background factors that are consistently significant predictors of test scores across the four groups. No variables appear consistently significant in predicting results from the Preschool Inventory. On the Spanish Vocabulary and Concept Comprehension Test, mothers' educational level continuously correlates in a negative direction with students test scores. This is consistent with other correlations examined from the parent interview that showed that mothers with a lower education felt learning to write Spanish was more important than did mothers with a higher education level. On the English Vocabulary and Concept Comprehension Test, mothers' educational level

correlated positively with children's test scores for three of the four groups. On the Test of English Grammar and Vocabulary, a moderate positive correlation was found between the parents' desired educational level for their children at the preschool age but not at the in-school age.

Discussion

An analysis of pre and posttest scores from last year related to language acquisition of children in the Spanish Dame School Project indicates significant growth in both Spanish and English. Pretest scores from this year were also analyzed to determine if children with prior participation in the Spanish Dame Project scored higher than children new to the program. Spanish dominant children in the second year preschool and in kindergarten with such prior participation scored higher than those not previously participating in the project. English dominant children with prior participation in the project scored higher than those new to the project at each age level.

Results of a multiple regression analysis using eight student background factors other than language as predictors of success on four tests in the Spanish Dame Project recalled no consistent factors that could be considered good predictors of test performance in Spanish or English.

TABLE 1

PERCENTAGE OF STUDENTS IN THE 1971-72 SPANISH DAME BILINGUAL PROJECT AND CONTROL GROUPS SHOWN BY PLACE OF BIRTH

Place of Birth	Percentage of Children			
	Pre-School Bilingual N=86	Pre-School Control N=27	In-School Bilingual N=83	In-School Control N=51
San Jose	61	59	42	59
Elsewhere in Santa Clara County	2	11	5	12
Other part of California	11	4	15	4
Other state	19	19	27	20
Mexico	8	7	12	0
Other country	0	0	0	4

TABLE 2

PERCENTAGE OF STUDENTS IN THE BILINGUAL PROJECT AND CONTROL GROUPS SHOWN BY LENGTH OF RESIDENCE IN SAN JOSE

Length of Residence in San Jose	Percentage of Children			
	Pre-School Bilingual N=86	Pre-School Control N=27	In-School Bilingual N=83	In-School Control N=51
Less than year	11	7	5	8
One-two years	18	30	29	18
More than two years	69	63	66	74

TABLE 3

PERCENTAGE OF STUDENTS IN THE BILINGUAL PROJECT AND CONTROL GROUPS SHOWN BY LANGUAGE MOST FREQUENTLY USED BY CHILDREN AT HOME

Language Most Frequently Used	Percentage of Children			
	Pre-School Bilingual N=86	Pre-School Control N=27	In-School Bilingual N=83	In-School Control N=51
Mainly Spanish	42	22	32	6
Both Spanish and English	23	33	27	22
Mainly English	35	44	42	71

TABLE 4

PERCENTAGE OF MOTHERS OF PROJECT AND CONTROL GROUP CHILDREN COMPLETING VARIOUS YEARS OF SCHOOLING

Years of School Completed by Mother	Percentage of Mothers			
	Pre-School Bilingual	Pre-School Control	In-School Bilingual	In-School Control
1 or less	1	0	4	4
2	2	7	4	0
3	13	4	7	2
4	6	7	11	2
5	8	4	7	4
6	10	4	4	4
7	2	7	4	8
8	13	15	5	6
9	8	11	7	10
10	5	0	9	10
11	8	7	9	10
12	19	30	25	31
13 or more	2	4	3	4

TABLE 5

INTERCORRELATIONS AMONG THE FOUR VARIABLES USED
IN THE 1971-72 SPANISH DAME PRETEST BATTERY

	Preschool Inventory	Vocabulary & Concept Comprehension-Spanish	Vocabulary & Concept Comprehension-English	Test of English Grammar & Vocabulary
Preschool Inventory				
Vocabulary & Concept Comprehension Test - Spanish	.14			
Vocabulary & Concept Comprehension Test - English	.10	.18		
Test of English Grammar & Vocabulary	.37	-.20	.24	

TABLE 6

SUMMARY OF PRE AND POSTTEST RESULTS FOR THE SPANISH VOCABULARY AND CONCEPT COMPREHENSION TEST INVOLVING FIRST YEAR BILINGUAL PROJECT CHILDREN

	Pretest			Posttest			
Student Groupings	Number Tested	Mean	Standard Deviation	Number Tested	Mean	Standard Deviation	Gain
First Year Bilingual Three Year Olds	16	3.9	4.9	16	17.0	5.6	13.2*
First Year Bilingual Four Year Olds	6	4.3	2.0	6	19.6	6.3	15.3*
Three Year Old No Treatment Group	11	8.2	17.7	11	5.9	6.8	-2.3
Four Year Old No Treatment Group	8	11.5	6.4	8	16.8	9.9	5.3
Four Year Old 1331 Preschool Control Group	4	10.0	8.0	4	20.7	5.1	10.7*

*Significant difference on t test at .05

TABLE 7

SUMMARY OF PRE AND POSTTEST RESULTS
FOR THE SPANISH VOCABULARY AND CONCEPT COMPREHENSION TEST
INVOLVING SECOND YEAR BILINGUAL PROJECT

	Pretest			Posttest			
Student Groupings	Number Tested	Mean	Standard Deviation	Number Tested	Mean	Standard Deviation	Gain
Second Year Preschool Bilingual (4 year old) Group	21	22.5	11.8	21	34.6	6.6	12.1*
Four Year Old No Treatment Group	8	11.5	6.4	8	16.8	9.9	5.3*
Four Year Old 1331 Preschool Control Group	4	10.0	8.04	4	20.7	5.12	10.7*
Kindergarten Bilingual (5 year old) Group	11	24.5	14.1	11	28.8	12.7	4.3*
Kindergarten Control Group	9	22.7	15.7	9	24.7	14.3	2.0*

*Significant difference on t test at .05 level

TABLE 8

SUMMARY OF PRE AND POSTTEST RESULTS FOR THE SPANISH FOLLOWING DIRECTIONS SUBTEST OF CERVENKA'S TESTS OF BASIC COMPETENCE INVOLVING FIRST YEAR BILINGUAL PROJECT CHILDREN

	Pretest			Posttest			
Student Groupings	Number Tested	Mean	Standard Deviation	Number Tested	Mean	Standard Deviation	Gain
First Year Bilingual Three Year Olds	16	8.1	5.8	16	11.6	5.8	3.5*
First Year Bilingual Four Year Olds	8	14.5	2.9	8	15.6	2.0	1.1*
Three Year Old No Treatment Group	12	9.5	5.4	12	11.6	5.2	2.1*
Four Year Old No Treatment Group	11	13.0	3.7	11	15.8	2.1	2.8*
Four Year Old 1331 Preschool Control Group	6	2.1	5.3	6	12.3	3.9	-10.2*

*Significant difference on t test at .05 level

TABLE 9

SUMMARY OF PRE AND POSTTEST RESULTS FOR THE SPANISH FOLLOWING DIRECTIONS SUBTEST OF CERVENKA'S TESTS OF BASIC COMPETENCE INVOLVING SECOND YEAR BILINGUAL PROJECT CHILDREN

	Pretest			Posttest			
Student Groupings	Number Tested	Mean	Standard Deviation	Number Tested	Mean	Standard Deviation	Gain
Second Year Preschool Bilingual (4 year old) Group	24	13.8	4.3	24	17.3	2.5	3.5*
Four Year Old No Treatment Group	11	13.0	3.7	11	15.8	2.1	2.8*
Four Year Old 1331 Preschool Control Group	3	15.0	5.3	6	12.3	3.9	-2.7
Kindergarten Bilingual (5 year old) Group	11	13.4	12.6	11	13.3	13.2	- .1
Kindergarten Control Group	6	13.0	15.0	6	16.2	14.7	3.2

*Significant difference on t test at .05 level

TABLE 10

SUMMARY OF PRE AND POSTTEST RESULTS FOR THE TEST OF ENGLISH GRAMMAR AND VOCABULARY INVOLVING FIRST YEAR BILINGUAL PROJECT CHILDREN

Student Groupings		Number Tested	SUBTESTS: Vocabulary Comprehension Mean	S.D.	Vocabulary Production Mean	S.D.	Grammar Comprehension Mean	S.D.	Grammar Production Mean	S.D.
First Year Bilingual Three Year Old Group	October	17	4.2	5.4	9.7	3.5	5.5	6.7	2.1	3.6
	May	17	12.1	4.3	10.7	4.5	14.7	5.7	11.0	5.1
	Gain		7.9*		1.0		9.2*		8.9*	
First Year Bilingual Four Year Old Group	October	18	9.8	5.2	12.8	1.8	13.0	6.3	5.7	5.4
	May	18	14.6	2.2	14.1	3.7	18.2	2.2	13.9	4.0
	Gain		4.8*				5.2*		8.2*	
Three Year Old No Treatment Group	October	13	9.0	5.5	11.3	4.0	13.6	5.6	8.8	6.2
	May	13	13.5	2.8	14.7	5.1	16.8	3.4	15.0	6.1
	Gain		4.5*		3.4		3.2		6.2*	
Four Year Old No Treatment Group	October	15	15.6	4.5	12.8	2.9	15.9	2.8	9.7	5.1
	May	15	15.9	2.7	15.4	2.6	17.4	3.3	13.6	5.4
	Gain		.3		2.6		1.5		3.9	
Four Year Old 1331 Preschool Control Group	October	10	15.9	2.0	16.1	2.6	19.0	.6	16.9	2.8
	May	10	17.7	1.3	16.8	1.3	19.5	.7	12.6	3.4
	Gain		1.8*		.7		.5		-4.3*	

* Significant difference on t test at .05 level

TABLE 11

SUMMARY OF PRE AND POSTTEST RESULTS FOR THE TEST OF ENGLISH GRAMMAR AND VOCABULARY INVOLVING SECOND YEAR BILINGUAL PROJECT CHILDREN

Student Groupings		Number Tested	SUBTESTS: Vocabulary Comprehension Mean	S.D.	Vocabulary Production Mean	S.D.	Grammar Comprehension Mean	S.D.	Grammar Production Mean	S.D.
Second Year Bilingual Four Year Old Group	October	26	9.1	5.4	13.0	3.1	13.9	5.6	8.1	6.3
	May	26	13.1	3.2	12.0	4.3	18.6	2.1	14.3	4.1
	Gain		4.0*		-1.0		4.7*		6.2*	
Four Year Old No Treatment Group	October	15	15.6	4.5	12.8	2.9	15.9	2.8	9.7	5.1
	May	15	15.9	2.7	15.4	2.6	17.4	3.3	13.6	5.4
	Gain		.3		2.6		1.5		3.9	
Four Year Old 1331 Preschool Control Group	October	10	15.9	2.0	16.1	2.6	19.0	.6	16.9	2.8
	May	10	17.7	1.3	16.8	1.3	19.5	.7	12.6	3.4
	Gain		1.8*		.7		.5		-4.3	
Kindergarten Bilingual Group	October	13	15.9	12.6	16.0	16.4	18.8	13.6	15.0	7.2
	May	13	17.6	13.2	16.8	12.0	19.5	16.0	15.5	8.7
	Gain		1.7		.8		.7		.5	
Kindergarten Control Group	October	13	16.3	10.4	15.9	14.8	18.0	10.7	14.6	4.1
	May	13	17.5	11.8	18.8	8.4	19.8	15.2	17.8	6.4
	Gain		1.2		2.9		1.8		3.2*	

* Significant difference on t test at .05 level

TABLE 12

SUMMARY OF PRE AND POSTTEST RESULTS FOR THE FOLLOWING DIRECTIONS SUBTEST OF CERVENKA'S TEST OF BASIC COMPETENCE IN ENGLISH INVOLVING FIRST YEAR BILINGUAL PROJECT CHILDREN

	Pretest			Posttest			
Student Groupings	Number Tested	Mean	S.D.	Number Tested	Mean	S.D.	Gains
First Year Bilingual Three Year Old Group	19	4.2	5.9	19	8.4	6.1	4.2*
First Year Bilingual Four Year Old Group	16	7.7	6.6	16	12.7	5.0	5.0*
Three Year Old No Treatment Group	13	8.9	5.7	13	12.7	5.3	3.8*
Four Year Old No Treatment Group	15	12.1	3.8	15	14.5	3.2	2.4*
Four Year Old 1331 Preschool Control Group	8	18.0	8.4	8	16.5	2.4	-1.5*

*Significant difference on t test at .05 level

TABLE 13

SUMMARY OF PRE AND POSTTEST RESULTS FOR THE FOLLOWING DIRECTIONS SUBTEST OF CERVENKA'S TEST OF BASIC COMPETENCE IN ENGLISH INVOLVING SECOND YEAR BILINGUAL PROJECT CHILDREN

Student Groupings	Pretest Number Tested	Mean	S.D.	Posttest Number Tested	Mean	S.D.	Gains
Second Year Bilingual Four Year Old Group	23	8.1	5.9	23		3.3	6.2*
Four Year Old No Treatment Group	15	12.1	3.8	15	14.5	3.2	2.4*
Four Year Old 1331 Preschool Control Group	8	18.0	8.4	8	16.5	2.4	-1.5*
Kindergarten Bilingual Group	13	15.6	8.0	13	16.8	8.6	1.2
Kindergarten Control Group	13	16.4	9.4	13	18.2	11.0	1.8

*Significant diffence on t test at .05 level

TABLE 14

SUMMARY OF PRE AND POSTTEST RESULTS FOR THE SUB-SCORES OF THE INVENTORY OF DEVELOPMENTAL TASKS

STUDENT GROUPINGS		N	SUBSCORES OF IDT											
			1. Coordination		2. Visual Motor		3. Visual Perception		4. Visual Memory		5. Auditory Perception		6. Auditory Memory	
			M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
1. First Year Bilingual Three Year Old	Oct	19	10.3	2.7	4.7	1.6	5.5	3.7	2.2	1.7	2.3	1.5	1.3	1.7
	May		15.2	3.2	8.8	2.3	9.4	3.4	4.6	3.6	4.0	1.8	3.6	2.4
2. First Year Bilingual Four Year Old	Oct	19	12.6	3.5	8.1	3.1	8.9	3.2	5.2	3.1	3.1	1.1	4.0	2.0
	May		17.3	3.9	12.3	2.3	13.3	3.5	7.8	4.0	4.8	1.3	6.1	2.9
3. Second Year Bilingual	Oct	30	13.1	2.3	9.8	2.7	9.8	3.1	5.4	3.0	3.2	1.5	4.0	2.8
	May		19.1	2.3	14.1	2.8	12.1	2.5	10.7	3.2	4.9	1.4	10.6	17.3
4. Three Year Old Control	Oct	17	12.2	1.9	6.2	3.1	7.7	4.7	3.7	3.3	2.3	1.7	1.5	1.94
	May		14.6	2.2	9.0	3.7	10.2	4.0	5.6	3.9	2.5	2.1	4.3	11.3
5. Four Year Old Control	Oct	16	14.3	3.8	7.3	2.1	11.5	3.2	8.0	3.6	4.0	1.9	2.9	2.7
	May		17.7	3.7	12.2	3.3	14.2	3.1	9.8	4.0	5.4	1.9	5.4	2.9
6. Kindergarten Bilingual	Oct	17	16.6	6.5	11.7	5.0	13.2	5.1	10.0	4.5	4.8	2.0	7.7	3.7
	May		20.4	2.3	15.3	6.0	15.8	5.6	12.4	4.7	7.0	3.4	9.1	3.8